

ABSTRACT

Substantially rectangular-shaped tanks are provided for storing liquefied gas, which tanks are especially adapted for use on land or in combination with bottom-supported offshore structure such as gravity-based structures (GBS). A tank according to this invention is capable of storing fluids at substantially atmospheric pressure and has a plate cover adapted to contain fluids and to transfer local loads caused by contact of said plate cover with said contained fluids to an internal frame structure comprised of a plate girder ring frame structure and/or an internal truss frame structure. Optionally, a grillage of stiffeners and stringers may be disposed on the plate cover and additional stiffeners disposed on the plate girder ring frame structure and/or an internal truss frame structure. Methods of constructing these tanks are also provided.